

CLAIMS:

1. (Currently Amended) An agricultural, horticultural, or ornamental crop composition comprising:

(a) particulate material selected from the group consisting of talc, kaolin, beneficiated kaolin, bentonites, pyrophyllite, feldspar, chalk, limestone, precipitated calcium carbonate, diatomaceous earth, barites, and calcined calcium carbonate, calcined talc, calcined kaolin, baker kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barites, calcined aluminum trihydrate, calcined pyrogenic silica, calcined titanium dioxide, or mixtures thereof, wherein the particulate material has a particle size of about 10 μm or less;

(b) an organic high boiling oil; and

(c) particulate colored particles different from the particulate material (a), wherein the composition forms a film of thickness between ~~4 μm~~ 1 μm and 5 mm disposed over a plant-producing substrate, and wherein the colored particles are present in an amount so that the spectrum of reflected light or heat exchange from the substrate is altered compared to a substrate having a film of particulate material (a) and high boiling oil thereon.

2. (Canceled)

3. (Original) The composition of claim 1 wherein said particulate material (a) is selected from the group consisting of calcium carbonate, calcined talc, calcined kaolin, baked kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barytes, calcined aluminum trihydrate, calcined pyrogenic silica, and calcined titanium dioxide.

4. (Previously Presented) The composition of claim 1 wherein said high boiling oil comprises an organic non-vegetable non-fuel high boiling oil (b) is selected from the group consisting of saturated and unsaturated C-6 to C-32 fatty acids, animal oil, synthetic oil, and petroleum based oil.

5. (Previously Presented) The composition of claim 1 further comprising an ionic salt selected from the group consisting of sodium chloride, potassium chloride, calcium chloride, magnesium chloride, sodium sulfate, potassium sulfate, calcium sulfate, magnesium sulfate, sodium nitrate, potassium nitrate, calcium nitrate, magnesium nitrate, sodium carbonate, potassium carbonate, magnesium carbonate, sodium nitrite, potassium nitrite, copper based salt, silver based salt, potassium sulfate, and organic water soluble salts.

6. (Previously Presented) The composition of claim 1 wherein said colored particles (c) are selected from the group consisting of natural iron oxides, black iron oxides, synthetic iron oxides, precipitated red iron oxide, brown iron oxides, synthetic black iron oxides, copper-black, chrome-black, zinc magnesium ferrite pigments, carbon black pigments, graphite, aniline black, logwood black lakes, yellow sulfur, and pigments that selectively reflect or absorb in red, blue, or green regions.

7. (Previously Presented) The composition of claim 6 wherein said colored particles (c) are selected from the group consisting of yellow limonite, red hematite, brown limonite, Pigment Black 10, copper red, ferrite red, precipitated red iron oxide, Pigment Brown 6, brown ocher, Pigment Black 1, synthetic magnetite, copper-black, chrome-black, Pigment Brown 11, mapioc tans, Pigment Black 6, Pigment Black 7, furnace black, channel black, acetylene black, furnace black, bone black, lampblack, natural and synthetic graphites, Pigment Black 1, Natural Black 3, Lake, and Logwood Pigment.

8. (Original) The composition of claim 1 wherein said particulate material is a hydrous kaolin.

9. (Previously Presented) The composition of claim 1 further comprising a surfactant selected from the group consisting of modified phthalic glycerol alkyl resins, plant oil based materials with emulsifiers, polymeric terpenes, and nonionic detergents.

10. (Previously Presented) The composition of claim 1 further comprising at least one of a surfactant or an ionic salt.

11. (Original) A bloom thinning emulsion comprising said composition of claim 1 and additionally comprising water.

12. (Withdrawn, Currently Amended) A method of controlling pests comprising the step of: applying to a substrate a composition comprising: (a) particulate material selected from the group consisting of talc, kaolin beneficiated kaolin, bentonites, pyrophyllite, feldspar, chalk, limestone, precipitated calcium carbonate, diatomaceous earth, barites, and calcined calcium carbonate, calcined talc, calcined kaolin, baked kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barites, calcined aluminum trihydrate, calcined pyrogenic silica, calcined titanium dioxide, or mixtures thereof, wherein the particulate material has a particle size of about 10 μm or less; (b) an organic high boiling oil; and (c) colored particles different from the particulate material (a), wherein the composition forms a film of thickness between ~~1-4~~ 1 μm and 5 mm disposed over a plant-producing substrate, and wherein the colored particles are present in an amount so that the spectrum of reflected light or heat exchange from the substrate is altered compared to a substrate having a film of particulate material (a) and high boiling oil thereon.

13. (Canceled)

14. (Withdrawn) The method of claim 12 wherein said particulate material (a) is selected from the group consisting of calcined calcium carbonate, calcined talc, calcined kaolin,

baked kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barites, calcined aluminum trihydrate, calcined pyrogenic silica, and calcined titanium dioxide.

15. (Withdrawn, Previously Presented) The method of claim 12 wherein said high boiling oil comprises a non-vegetable non-fuel high boiling oil (b) is selected from the group consisting of industrial oil, marine oil, paraffin oils, saturated and unsaturated C-6 to C-32 fatty acids, animal oil, synthetic oil, and petroleum based oil.

16. (Withdrawn, Previously Presented) The method of claim 12 further comprising an ionic selected from the group consisting of sodium chloride, potassium chloride, calcium chloride, magnesium chloride, sodium sulfate, potassium sulfate, calcium sulfate, magnesium sulfate, sodium nitrate, potassium nitrate, calcium nitrate, magnesium nitrate, sodium nitrate, potassium nitrate, calcium nitrate, magnesium nitrate, sodium carbonate, potassium carbonate, magnesium carbonate, sodium nitrite, potassium nitrite, copper based salt, silver based salt, potassium sulfate, and organic water soluble salt.

17. (Withdrawn, Previously Presented) The method of claim 12 wherein said colored particles (c) are selected from the group consisting of natural iron oxides, black iron oxides, synthetic iron oxides, precipitated red iron oxide, brown iron oxides, synthetic black iron oxides, copper-black, chrome-black, zinc magnesium ferrite pigments, carbon black pigments, graphite, aniline black, logwood black lakes, yellow sulfur, and pigments that selectively reflect or absorb in red, blue, or green regions.

18. (Withdrawn, Previously Presented) The method of claim 12 wherein said colored particles (c) are selected from the group consisting of yellow limonite, red hematite, brown limonite, Pigment Black 10, copper red, ferrite red, precipitated red iron oxide, Pigment Brown 6, brown ocher, Pigment Black 1, synthetic magnetite, copper-black, chrome-black, Pigment

Brown 11, mapioc tans, Pigment Black 6, Pigment Black 7, furnace black, channel black, acetylene black, furnace black, bone black, lampblack, natural and synthetic graphites, Pigment Black 1, Natural Black 3, and Logwood Pigment.

19. (Withdrawn) The method of claim 12 wherein said particulate material is a hydrous kaolin.

20. (Withdrawn, Previously Presented) The method of claim 12 further comprising a surfactant selected from the group consisting of modified phthalic glycerol alkyl resins, plant oil based materials with emulsifiers, polymeric terpenes, and nonionic detergents.

21. (Withdrawn, Previously Presented) The method of claim 12 further comprising at least one of a surfactant or an ionic salt.

22. (Withdrawn) The method of claim 12 wherein said substrate is selected from the group consisting of oil; peat; compost; vermiculite; rockwool; synthetic growing media; weeds; weed roots; weed seeds; non-agricultural plants located near agricultural crops; and non-useful, non-ornamental plants.

23.-45. (Canceled)

46. (Previously presented) The composition of claim 1 wherein the particulate material has a particle size of about 3 μm or less.

47. (Previously presented) The composition of claim 1 wherein the particulate material has a particle size of about 1 μm or less.

48. -49. (Canceled)

50. (Previously presented) The composition of claim 3 wherein the particulate

material has a particle size of about 3 μm or less.

51. (Previously presented) The composition of claim 3 wherein the particulate material has a particle size of about 1 μm or less.

52. (Previously Presented) The composition of claim 1 wherein the composition consists essentially of said particulate material, said high boiling oil, and said colored particles, and an agrichemical selected from the group consisting of nutrients, microbial agents, fertilizers, herbicides, pesticides, fungicides, and insecticide is not incorporated in the composition.

53. (Previously Presented) The composition of claim 1 further comprising at least one agrichemical selected from the group consisting of nutrients, microbial agents, fertilizers, herbicides, pesticides, fungicides, and insecticide.

54. (Previously presented) The composition of claim 1 wherein the composition is in a form of a powder, slurry, or emulsion.

55.-58. (Canceled)

59. (Withdrawn) The method of claim 12 wherein the particulate material has a particle size of about 3 μm or less.

60. (Withdrawn) The method of claim 12 wherein the particulate material has a particle size of about 1 μm or less.

61. -62. (Canceled)

63. (Withdrawn) The method of claim 14 wherein the particulate material has a particle size of about 3 μm or less.

64. (Withdrawn) The method of claim 14 wherein the particulate material has a particle size of about 1 μm or less.

65. (Withdrawn) The method of claim 12 wherein an agrichemical selected from the group consisting of nutrients, microbial agents, fertilizers, herbicides, pesticides, fungicides, and insecticide is not incorporated in the composition.

66. (Currently Amended) The composition of claim 1 wherein the composition forms a film of thickness between ~~5- μ~~ 5 μm and 2 mm disposed over a plant-producing substrate.

67. (Previously Presented) The composition of claim 66 wherein the plant-producing substrate is soil.

68. (Previously Presented) The composition of claim 67 wherein the particulate material is limestone, precipitated calcium carbonate, or mixture thereof.

69. (Previously Presented) The composition of claim 67 wherein the particulate material is beneficiated kaolin, hydrophobic kaolin, or mixture thereof.

70. (Previously Presented) The composition of claim 67 wherein the particulate material has a Block Brightness of at least 80.

71. (Previously Presented) The composition of claim 67 wherein the particulate material has a Block Brightness of at least 90.

72. (Previously Presented) The composition of claim 67 wherein the colored particles comprise an iron oxide.

73. (Currently Amended) An agricultural, horticultural, or ornamental crop composition comprising:

(a) particulate material selected from the group consisting of talc, kaolin, beneficiated kaolin, bentonites, pyrophyllite, feldspar, chalk, limestone, precipitated calcium carbonate, diatomaceous earth, barites, and calcined calcium carbonate, calcined talc, calcined kaolin, baker kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barites, calcined aluminum trihydrate, calcined pyrogenic silica, calcined titanium dioxide, or mixtures thereof, wherein the particulate material has a particle size of about 10 μm or less;

(b) a high boiling vegetable-based oil; and

(c) particulate colored particles, wherein the composition forms a film of thickness between ~~5-μ~~ 5 μm and 5 mm disposed over a plant-producing substrate, and wherein the colored particles are present in an amount so that the spectrum of reflected light or heat exchange from the substrate is altered compared to a substrate having a film of particulate material and high boiling oil thereon.